

## STYLIZED IMAGE PAINTING

### BACKGROUND

[0001] Computing devices, such as wearable devices, including portable eyewear devices (e.g., smartglasses, headwear, and headgear); mobile devices (e.g., tablets, smartphones, and laptops); and personal computers available today integrate image displays and cameras. Currently, users of computing devices can utilize photo filters to create effects on images. Various photo decorating applications feature tools like stickers, emojis, and captions to edit the images.

### DRAWINGS

[0002] The drawing figures depict one or more implementations, by way of example only, not by way of limitations. In the figures, like reference numerals refer to the same or similar elements.

[0003] FIG. 1A is a right side view of an example hardware configuration of an eyewear device utilized in a photo filter (e.g., artistic/stylized painting) stylized image painting system, in which the style of a selected image is transferred to designated portions of a subject image to create a stylized image.

[0004] FIG. 1B is a top cross-sectional view of a right chunk of the eyewear device of FIG. 1A depicting a right visible light camera of a depth-capturing camera, and a circuit board.

[0005] FIG. 1C is a left side view of an example hardware configuration of an eyewear device of FIG. 1A, which shows a left visible light camera of the depth-capturing camera.

[0006] FIG. 1D is a top cross-sectional view of a left chunk of the eyewear device of FIG. 1C depicting the left visible light camera of the depth-capturing camera, and the circuit board.

[0007] FIG. 2A is a left side view of another example hardware configuration of an eyewear device utilized in the photo filter (e.g., artistic/stylized painting) stylized image painting system, which shows the right visible light camera and a depth sensor of the depth-capturing camera to generate a depth image.

[0008] FIGS. 2B and 2C are rear views of example hardware configurations of the eyewear device, including two different types of image displays.

[0009] FIG. 3 shows a rear perspective sectional view of the eyewear device of FIG. 2A depicting an infrared camera of the depth sensor, a frame front, a frame back, and a circuit board.

[0010] FIG. 4 is a cross-sectional view taken through the infrared camera and the frame of the eyewear device of FIG. 3.

[0011] FIG. 5 shows a rear perspective view of the eyewear device of FIG. 2A depicting an infrared emitter of the depth sensor, the infrared camera of the depth sensor, the frame front, the frame back, and the circuit board.

[0012] FIG. 6 is a cross-sectional view taken through the infrared emitter and the frame of the eyewear device of FIG. 5.

[0013] FIG. 7 depicts an example of a pattern of infrared light emitted by the infrared emitter of the depth sensor and reflection variations of the emitted pattern of infrared light

captured by the infrared camera of the depth sensor of the eyewear device to measure depth of pixels in a raw image to generate the depth image.

[0014] FIG. 8A depicts an example of infrared light captured by the infrared camera of the depth sensor as an infrared image and visible light captured by a visible light camera as a raw image to generate the depth image of a three-dimensional scene.

[0015] FIG. 8B depicts an example of visible light captured by the left visible light camera as left raw image and visible light captured by the right visible light camera as a right raw image to generate the depth image of a three-dimensional scene.

[0016] FIG. 9 is a high-level functional block diagram of an example photo filter (e.g., artistic/stylized painting) light field effect system including the eyewear device with a depth-capturing camera to generate a photo filter stylized painting effect image and a user input device (e.g., touch sensor), a mobile device, and a server system connected via various networks.

[0017] FIG. 10 shows an example of a hardware configuration for the mobile device of the photo filter (e.g., artistic/stylized painting) light field effect system of FIG. 9, which includes a user input device (e.g., touch screen device) to receive mark-up and an image selection to transfer to a raw image or a processed image to generate a photo filter effect image.

[0018] FIG. 11A is a flowchart of a method that can be implemented in the photo filter (e.g., artistic/stylized painting) light field effect system to apply to a raw image or a processed image to generate a photo filter stylized painting effect image.

[0019] FIG. 11B is a flow chart of a method for creating a stylized painting image.

[0020] FIG. 12A illustrates an example of a first presented original image, which is a processed (e.g. rectified) image.

[0021] FIG. 12B illustrates an example of the first presented original image with markups by a user.

[0022] FIG. 12C illustrates an example of a photo filter (e.g., stylized painting effect) image created from the first presented original image of FIG. 12A.

[0023] FIG. 12D illustrates an example of a first photo filter (e.g., artistic/stylized painting) light field effect image generated from the photo filter image of FIG. 12B, in which the spatial movement or rotation is skewed to the left.

[0024] FIG. 12E illustrates an example of a second photo filter (e.g., artistic/stylized painting) light field effect image generated from the photo filter image of FIG. 12B, in which the spatial movement or rotation is skewed to the right.

[0025] FIG. 13 illustrates an example of a photo filter (e.g., stylized painting effect) images with blending of the stylized painting with the original image in the regions of the markups.

### DETAILED DESCRIPTION

[0026] Examples described herein relate to transferring the style of a selected image to mark-ups for a subject image. This enables a user to “paint” (selectively apply) the style to the subject image, which provides more artistic freedom and improves the user experience.

[0027] In the following detailed description, numerous specific details are set forth by way of examples in order to provide a thorough understanding of the relevant teachings. However, it should be apparent to those skilled in the art that